

**ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM**

Plant Abstract

Element Code: PDFAB5L030

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Pediomelum aromaticum*
COMMON NAME: Aromatic Indian Breadroot, Aromatic Scurf Pea
SYNONYMS: *Psoralea aromatica*, *P. raphaelensis*
FAMILY: Fabaceae

AUTHOR, PLACE OF PUBLICATION: Weber, William Alfred. Phytologia 53(3): 188. 1983.

TYPE LOCALITY: Bedrock, Colorado, dry hillside, 5000 feet.

TYPE SPECIMEN: The Gray Herbarium: GH063875 (Isotype for *Psoralea aromatica*). E.B. Payson #451. June 17, 1914.

TAXONOMIC UNIQUENESS: The genus *Pediomelum* is native to North America and has 24 species with another eight varieties. Eight of the species and three of the varieties are found in Arizona (four of the species are found *only* in Arizona).

DESCRIPTION: Perennial, Herbs, Stems woody below, or from woody crown or caudex, Plants with rhizomes or suckers, Taproot present, Nodules present, Stems erect or ascending, Stems or branches arching, spreading or decumbent, Stems less than 1 m tall, Plants gland-dotted or with gland-tipped hairs, Stems solid, Stems or young twigs glabrous or sparsely glabrate, Stems or young twigs sparsely to densely hairy, Leaves alternate, Leaves petiolate, Stipules conspicuous, Stipules green, triangulate to lanceolate or foliaceous, Stipules setiform, subulate or acicular, Stipules persistent, Stipules free, Leaves compound, Leaves palmately 5-11 foliate, Leaf or leaflet margins entire, Leaflets 5-9, Leaves glabrous or nearly so, Leaves hairy on one or both surfaces, Inflorescences racemes, Inflorescence umbel-like or subumbellate, Inflorescences globose heads, capitate or subcapitate, Inflorescence axillary, Bracts conspicuously present, Bracts hairy, Flowers zygomorphic, Calyx 5-lobed, Calyx hairy, Petals separate, Corolla papilionaceous, Petals clawed, Petals blue, lavender to purple, or violet, Banner petal ovoid or obovate, Banner petal auriculate, Wing petals narrow, oblanceolate to oblong, Wing petals auriculate, Wing tips obtuse or rounded, Keel tips obtuse or rounded, not beaked, Stamens 9-10, Stamens diadelphous, 9 united, 1 free, Filaments glabrous, Style terete, Style hairy, Fruit a legume, Fruit unilocular, Fruit freely dehiscent, Fruit oblong or ellipsoidal, Fruit exserted from calyx, Fruit beaked, Fruit glabrous or glabrate, Fruit hairy, Fruit gland-dotted or with gland-tipped hairs, Fruit 1-seeded, Seeds ovoid to rounded in outline, Seed surface smooth, Seeds olive, brown, or black. (EOL 2014).

AIDS TO IDENTIFICATION: Flowers 8-14 mm long; leaves green, palmate with (3) 5-7 leaflets; not forming a basal rosette; stems 15-30 cm tall; much branched perennial herb (Spackman and Anderson 2002).

ILLUSTRATIONS:

Herbarium Mounts: <http://eol.org/pages/683501/media>.

Photo: From Spackman and Anderson 2002:

http://www.cnhp.colostate.edu/download/documents/2002/rare_plant_guide_update.pdf.

TOTAL RANGE: This species is known from Mesa and Montrose counties in Colorado; Mohave County, Arizona; and San Juan, Washington, Emery and Grand counties, Utah.

RANGE WITHIN ARIZONA: *P. aromaticum* is known in Arizona from only four collections, all from Mohave County. To date, all occurrences are in the vicinity of the northern Vermilion Cliffs, near the Utah border and east of Colorado City.

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Perennial herb, stems with woody base or caudex, with rhizomes and taproots.

PHENOLOGY: Flowers: May-June; Fruits: June. Arizona collections reported flowering May 10 and 25, and June 13.

BIOLOGY:

HABITAT: Open Pinyon-Juniper woodlands.

ELEVATION: Range-wide: 4800 – 5700 feet (1460-1740m). Arizona occurrences were between 4920 – 5100 feet (1500-1555m).

EXPOSURE: Not specified.

SUBSTRATE: Sandy soils, adobe hills and open gravelly ground, according to the literature (EOL 2014). Arizona collections also noted Chinle clay soils and red sandstone.

PLANT COMMUNITY: Pinyon-Juniper. *Shepherdia rotundifolia* was also mentioned.

POPULATION HISTORY AND TRENDS: Unknown for Arizona. There are only four known occurrences in the state, collected between 1972 and 2005. Globally (Colorado, Utah and Arizona) the species is ranked as vulnerable. There are at least 19 known occurrences, the distribution range does not appear restricted, no major threats are known, and some populations occur on protected lands (but not in Arizona). The species is ranked as critically impaired in Arizona.

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None.
STATE STATUS: None.
OTHER STATUS: None.

MANAGEMENT FACTORS: The only reported threats are trails and grazing.

PROTECTIVE MEASURES TAKEN: Although the species has no protective status in Arizona, it has already been listed in the 1997 Red List of Threatened Plants in Utah and Colorado as Vulnerable. No specific protective measures have been taken in Arizona to date.

SUGGESTED PROJECTS: The known populations should be revisited periodically to ascertain if they are still extant, and preferably be monitored to determine if the populations are increasing or decreasing. More expanded surveys to determine if there are additional populations would be ideal.

LAND MANAGEMENT/OWNERSHIP: One of the occurrences was collected from two nearby sites and overlaps on State, private and BLM lands. Another collection overlapped on private and BLM lands. The third site was entirely within the BIA Kaibab-Paiute Indian Reservation.

SOURCES OF FURTHER INFORMATION

REFERENCES:

Encyclopedia of Life, accessed 6/17/2014, <http://eol.org/pages/683501/details>.
JStor| Global Plants, accessed 6/17/2014, <http://plants.jstor.org/specimen/gh00063875?s=t>.
NatureServe Explorer, an Encyclopedia of Life, accessed 6/17/2014,
<http://explorer.natureserve.org/servlet/NatureServe?searchSciOrCommonName=Pediomelum&x=13&y=14>.
Spackman, Susan and David G. Anderson. 2002. Colorado Rare Plant Field Guide 2002 Update. Colorado Natural Heritage Program, Colorado State University, Fort Collins.
Tropicos, accessed 6/17/2014, <http://www.tropicos.org/Name/13064623>.

MAJOR KNOWLEDGEABLE INDIVIDUALS:

ADDITIONAL INFORMATION:

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